

State of the Globe: Detecting HSV in Clinical Setting

The prevalence of HSV infection worldwide has increased over the last several decades, making it a major public health concern. Prompt recognition of herpes simplex infection and early initiation of therapy are of utmost importance in the management of the disease. Humans are the only natural reservoirs of Herpes and no vectors are involved in transmission.^[1] Herpes is endemic in most human communities owing to the fact that it has a latency period with periodic reactivation and asymptomatic virus shedding. Up to 80% of herpes simplex infections are asymptomatic and symptomatic infections can be characterized by significant morbidity and recurrence. This study by Tada and Khandelwal analysis the demographic distribution of sexually transmitted diseases and the correlation of history and clinical presentation with serological results of patients tested in the STD clinic of a tertiary care hospital.

About 150 patients diagnosed with sexually transmitted disease at the STD clinic were tested for HSV1 and 2 Ig M specific antibodies by ELISA. Majority (52%) of the patients tested positive for HSV1, 2 belonged to 21-30 years age group with females being the predominant sex. Although the study is done in a small sample of 150 patients, it reveals the high proportionality of HSV 1 and 2 in the patients with STDs. It's noteworthy to analyze distribution of HSV 1, 2 Ig M positivity based on age, gender and presence of other STDs. Moreover, it demonstrates this difference as statistically significant which adds weight to the overall implication of the results. The results also stress on the fact that despite having clinical manifestations, patients may test negative for HSV 1, 2 Ab. This warrants the need to use serology in correlation with clinical manifestations to overcome this diagnostic dilemma.

Amongst the patients, few patients had no history of recurrent herpes but were tested positive for HSV 1 and 2. Since Herpes has a latent period, the presence of the iceberg phenomenon should be kept in mind while screening patients. Seropositivity to antibodies of HSV is

found to be more common in women than in men.^[2] This study also reveals the relatively high number of genital Herpes positivity among all STDs and that the proportional positivity rate of serum HSV1 and 2 is highest in patients with cervico vaginal discharge (27%). This emphasizes the fact that since females have a higher tendency for early seroconversion, it's crucial to screen females, especially of the reproductive age group. Thus, early diagnosis and treatment could prevent a considerable percentage of vertical transmission by facilitating early counseling and therapeutic care for all STD's especially Herpes. From the patients who had history of recurrent genital herpes, 16.66 % showed positivity by serum HSV-1 and 2 Ig M. This strongly suggests that some patients with reactivated herpes get high titers of Ig M. So, Ig M cannot be always considered as the marker of primary infection.

Also, this study used ELISA as a screening test for detecting HSV 1, 2. The sensitivity and specificity of ELISA is 94.40% and 93.91% respectively.^[3] Comparison between different assay methods with respect to specificity and sensitivity shows ELISA to be the most suitable of the available techniques for screening HSV seropositivity.^[4] Increased age (after onset of sexual activity) and total number of sexual partners are independent factors associated with increased seroprevalence of HSV-2 antibodies.^[2] Considering that Herpes is a lifelong infection, not cured by antimicrobial treatment, patients who have contacted HSV1 and 2 will always be seropositive for the antibodies unlike syphilis.^[5,6] So, it's worth noting that the analysis of demographic distribution of Herpes serves as a useful tool to understand the trends of transmissibility and high risk behavior in a community. In particular, this could help the public health department to plan preventive care for STD's more efficiently which would reduce the disease burden in the community.

There are some limitations to this study. This study fails to consider HIV positivity which is a potential cause of immunosuppression. Also, presence of other risk factors for immunosuppression is not taken into account and this could inadvertently affect the frequency and intensity of reactivation and thus affect the serological titres. Another factor affecting the accuracy is the failure to describe the demography of the target population. Finally, the relatively fewer patients' involved in this study limits accurate assessment of the potential impact on patient management in a larger population.

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